Remarks

Applicant respectfully requests reconsideration. Claims 1-3, 5-12 and 15-32 were pending for examination. Applicant has amended claims 1 and 28 to clarify these claims. No new matter has been added.

Rejections Under 35 U.S.C. § 112

1. The Examiner rejected claims 1-3, 5-12 and 15-32 under 35 U.S.C. § 112, first paragraph, as failing to comply with the written description requirement. Applicant respectfully requests reconsideration of the rejection.

Applicant has amended claim 1 to recite "acute or chronic cutaneous wounds". This phrase is supported in the specification, for example at page 11, lines 6-7.

Accordingly, Applicant respectfully requests that the rejection of claims 1-3, 5-12 and 15-32 under 35 U.S.C. § 112, first paragraph, be withdrawn.

2. The Examiner rejected claims 1-3, 5-12 and 15-32 under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Applicant respectfully requests reconsideration of the rejection.

First, Applicant has amended claim 1 to recite "acute or chronic cutaneous wounds". No uncertainty exists in this recitation of the amended claim.

Second, Applicant has amended claim 1 to recite "wound bed of the acute or chronic cutaneous wounds" so as to clarify to which wound bed the claim is referring.

Third, Applicant has amended claim 28 to recite "acute or chronic cutaneous wounds" in order that the recitation of "cutaneous wounds" is the same as claim 1.

Accordingly, Applicant respectfully requests that the rejection of claims 1-3, 5-12 and 15-32 under 35 U.S.C. § 112, second paragraph, be withdrawn.

Rejections Under 35 U.S.C. § 103

1. The Examiner rejected claims 1-3, 5-12 and 15-32 under 35 U.S.C. § 103(a) as unpatentable over the Daw et al. reference or the France et al reference in view of the Mayes et al. patent (US 6,150,459) and the McAuslan publication (WO 87/05038). Applicant respectfully requests reconsideration of the rejection.

In response to the claim rejection under 35 U.S.C. § 103(a), Applicant disagrees with the Examiner's assertion that it would have been obvious to apply the cell-binding polymer or copolymer of Daw et al. or France et al. to a substrate for implanting as suggested by Myers et al. and McAuslan, applying a cell-binding polymer to a substrate to provide an implant, which can be seeded with cells. In particular, Applicant disagrees with the Examiner that the resulting implantable substrate containing the cell binding polymer or copolymer of Daw et al. or France et al. is a therapeutic vehicle as presently claimed and is inherently capable of being applied to acute or chronic cutaneous wounds and permitting keratinocytes to attach and detach to transfer to a wound bed of acute or chronic cutaneous wounds.

With regard to the teaching of France et al., the document discloses a variety of plasma co-polymers (PCPs). In particular, France et al. discloses on PCP surfaces containing 2.3% carboxylic acid groups very high levels of cell attachment were measured. As taught in the present application (page 24, lines 3 to 14), whilst low concentrations of acid groups impart stability to the PCP surface, the keratinocytes may be sufficiently well attached that transfer is inhibited. This is confirmed by the results of the shown in Figure 3 of the present application,

which shows that for cells grown on the 25% acid treated surface (equivalent to 2.6% carboxylic acid at the PCP surface) detachment was comparable to that seen on carrier alone. Accordingly, keratinocytes will not always be able to attach, grow and detach from PCP surfaces containing 2.3% carboxylic acid groups and thus this property is not inherent of all polymers of France et al.

With regard to the teaching of Daw et al., the document contains no teaching regarding keratinocytes and their attachment, growth and detachment from PCP surfaces. Daw et al. discloses a series of plasma copolymerised films formed from varying percentages of acrylic acid in the monomer flow. The functional group composition of two plasma co-polymers was compared. As disclosed in Table 1, PCPs having a 40% acid content in the monomer had a 3.0% COOH group surface composition, PCPs having a 50% acid content in the monomer had a 4.9% COOH group surface composition. Figure 3 teaches that PCPs having a 20% acid content in the monomer were produced. Figure 6 teaches that PCPs having 15% acrylic acid content in the monomer were flow were produced. It is submitted that PCPs having such a low percentage of acid in the monomer flow would likely produced surfaces having very low concentrations of acid groups at the PCP surface and, as discussed above, would likely attach keratinocytes sufficiently well such that transfer is inhibited. Accordingly, keratinocytes will not always be able to attach, grow and detach from PCP surfaces disclosed therein and thus this property is not inherent of all polymers of Daw et al.

Application of the plasma copolymers of Daw et al. or France et al. to a substrate for implanting as suggested by Myers et al or McAuslan would not inherently permit keratinocytes to attach and detach to a wound bed when the polymer or copolymer is a therapeutic vehicle and is applied to acute or chronic cutaneous wounds.

Therefore, the combination of references does not provide all of the elements of the claimed invention and further would not provide the skilled person with a reasonable expectation of success in making the claimed invention.

To clarify the difference between the prior art and the claimed invention, but without prejudice, Applicant has removed the word "can" from claim 1. Therefore, the optional feature

of the cell culture surface in which keratinocytes attach and detach to transfer to a wound bed is now required by the claims. Accordingly, the Examiner's statements in the first paragraph of page 6 of the Office Action with respect to Applicant's arguments no longer are applicable.

Accordingly, Applicant respectfully requests that the rejection of claims 1-3, 6-12 and 15-32 under 35 U.S.C. § 103(a), as unpatentable over the Daw et al. reference or the France et al reference in combination with the Mayes et al. and McAuslan references be withdrawn.

2. The Examiner also rejected claim 5 as unpatentable over Daw et al. or France et al. in combination with the Mayes et al and McAuslan references, in view of Yanagihara et al (US patent 4,693,799). Applicant respectfully traverses the rejection.

The combination of Daw et al., France et al., Mayes et al. and McAuslan references is insufficient to set forth a *prima facie* case of obviousness as argued above. The Yanagihara et al. reference does not supply the elements or expectation of success missing from the combination of references. Therefore, the combination of Daw et al., France et al., Mayes et al., McAuslan and Yanagihara et al. references is not sufficient to render claim 5 obvious.

Accordingly, Applicant respectfully requests that the rejection of claim 5 under 35 U.S.C. 103(a) be withdrawn.

CONCLUSION

In view of the foregoing remarks, this application should now be in condition for allowance. A notice to this effect is respectfully requested. If the Examiner believes, after this amendment, that the application is not in condition for allowance, the Examiner is requested to call the Applicant's attorney at the telephone number listed below.

If this response is not considered timely filed and if a request for an extension of time is otherwise absent, Applicant hereby requests any necessary extension of time. If there is a fee occasioned by this response, including an extension fee, that is not covered by an enclosed check, please charge any deficiency to Deposit Account No. 23/2825.

Respectfully submitted,
Short, et al., Applicant

By: 

John R. Van Amsterdam
Reg. No. 40,212
Wolf, Greenfield & Sacks, P.C.
600 Atlantic Avenue
Boston, Massachusetts 02210
Telephone: (617) 646-8000

Docket No.: H0664.70002US00
Date: January 3, 2007
x01/03/07x